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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,764	08/25/2003	Takashi Nishimura	03280078US	1257

7590 08/24/2005

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EXAMINER

VANNUCCI, JAMES

ART UNIT PAPER NUMBER

2828

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,764

Applicant(s)

NISHIMURA, TAKASHI

Examiner

Jim Vannucci

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 14-22, 32-38 and 58 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6, 14-22, 32-38 and 58 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3-22-04 & 1-14-04 & 12/8/03
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: IDS of 12-8-03

DETAILED ACTION

Election/Restrictions

1. Claims 7-13, 23-31 and 39-57 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 8, 2005. Applicant indicated that claim 31 was part of the elected species. However, it appears claim 31 is from a different species and claim 31 has not been addressed here.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 6, 14-19 and 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Manabe(6,404,552).

Claim 1, figure 1 discloses a light transmissive member(104) having a first surface(104a) and a second surface(104b), a first light-separating portion(col. 8, lines 18-19) formed on the first surface since the first surface is in contact with surface 103b, and a second light-separating portion(col. 7, lines 35-39) formed on the second surface.

Claim 2, the first light-separating portion(104a) separates a portion of the single incident beam into a reflected light and a transmitted light, the second light-separating portion(104b) separates a remaining portion of the single incident beam into a reflected light and a transmitted light, and the beam splitter outputs two beams of reflected light(106B & 106R) and one beam of transmitted light(106G).

Claims 3 and 18, the light transmissive member(104) disclosed in figure 1 is a transparent optical member in a shape of a triangular prism having three side surfaces where the first light-separating portion and the second light-separating portion are formed on two of the three side surfaces on the triangular prism.

Claims 4 and 19, the optical member(104) is a triangular prism having a bottom surface substantially in a shape of a right isosceles triangle.

Claims 6 and 21, the first and second disclosed light-separating portions have a reflectance of approximately 67% since each reflects one of the three colors of light propagating through the system.

Claims 14 and 22, the first and second light-separating portions disclosed in figure 1 are formed of a light-separating film.

Claim 15, figure 1 discloses a light source generating a light beam(101).

Claim 16, figure 1 discloses a line-beam-generating optical element(107) that produces a line beam from a light beam separated by at least one of the first and second light-separating portions.

Claim 17, figure 1 discloses a beam splitter that separates the light beam generated by the light source(101) into a first reflected beam reflected by the first light-

separating portion(104a), a second reflected beam reflected by the second light-separating portion(104b), a transmitted beam formed of both light transmitted through the first light-separating portion and light transmitted through the second light-separating portion, and a line-beam-generating optical element(107) that receives the first reflected beam, the second reflected beam, and the transmitted beam and converts the received beam to a line beam.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 20, 32-38 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manabe in view of Kim et al.(6,567,366).

Claims 5, 20 and 37, figure 1 of Manabe discloses a light transmissive member with a first optical member(104), a second optical member(103), and a third optical member(105) that are transparent prisms, where each of the transparent prisms has a bottom surface, two side surfaces that include two sides that form an apex angle in the bottom surface, and an opposing side surface that includes a side opposing the apex angle in the bottom surface, where the two side surfaces of the first optical member are bonded to the opposing side surface of the second optical member and to the opposing

side surface of the third optical member, and where the first light-separating portion and the second light-separating portion are formed on the two bonded side surfaces.

Only two, not all three, of the prisms disclosed in Manabe is an isosceles prism.

Figure 6 of Kim discloses using three isosceles prisms(43, 45 & 46) in a beam splitting device.

Claim 32, figure 1 of Manabe discloses a beam splitter receiving a light beam generated by a source, a light transmissive member having a first surface and a second surface, a first light-separating portion formed on the first surface, a second light-separating portion formed on the second surface, a line-beam-generating optical element generating a line beam from a light beam separated by at least one of the first and second light-separating portions, and a support unit supporting the source, the beam splitter, and the line-beam-generating optical element(col. 4, line 40).

Manabe does not disclose a laser source.

Kim discloses using a laser in a beam splitting device with prisms for improved transfer of information with an optical disk(col. 2).

Claim 33, see the rejection of claim 17 under Manabe above.

Claim 34, figure 1 of Manabe discloses a light-separating element(102p) provided along a path of the sum of the light reflected off the first light-separating portion, the light reflected off the second light-separating portion, and the light transmitted through the first and second light-separating portions, thereby generating four light beams, and a line-beam generating optical element(107) receiving the sum of the of the light beams and converting the light beams to line beams.

Claim 35, see the rejection of claim 3 under Manabe above.

Claim 36, see the rejection of claim 4 under Manabe above.

Claim 38, see the rejection of claim 6 under Manabe above.

Claim 58, see the rejection of claim 14 under Manabe above.

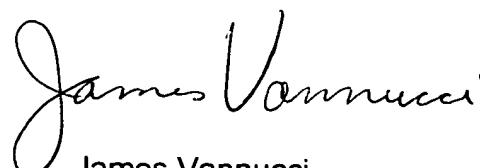
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the laser and three isosceles prisms disclosed in Kim in the device disclosed in Manabe for improved performance as disclosed in Kim.

Correspondence

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jim Vannucci whose phone number is (571) 272-1820.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center whose telephone number is (703) 308-0956.

Papers related to Technology Center 2800 applications only may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (571) 273-8300.


James Vannucci